

ACCIDENT

Aircraft Type and Registration:	Nipper T.66 RA45 Series 3, G-CBCK	
No & Type of Engines:	1 Jabiru Aircraft PTY 2200A piston engine	
Year of Manufacture:	1998	
Date & Time (UTC):	10 January 2011 at 1000 hrs	
Location:	Abbots Hill Farm Strip, Hertfordshire	
Type of Flight:	Private	
Persons on Board:	Crew - 1	Passengers - None
Injuries:	Crew - None	Passengers - N/A
Nature of Damage:	Wing tips, D-box leading edge, propeller, nose landing gear and left main landing gear	
Commander's Licence:	Private Pilot's Licence	
Commander's Age:	60 years	
Commander's Flying Experience:	2,085 hours (of which 245 were on type) Last 90 days - 6 hours Last 28 days - 1 hour	
Information Source:	Aircraft Accident Report Form submitted by the pilot	

Synopsis

Shortly after takeoff the engine lost power and the pilot closed the throttle and landed the aircraft on a down-sloping area of uneven ground. The main fuel tank, which had been selected for takeoff, was found to be empty and the auxiliary fuel tank contained two gallons of fuel. The pilot considered that fuel had transferred from the main tank to the auxiliary tank through a defective fuel tank selector switch, but also stated that he should have visually checked the fuel tanks prior to flight.

History of the flight

The aircraft had a main fuel tank mounted in the forward fuselage and one auxiliary fuel tank mounted in the

right wing root. The two tanks were independent of each other, with no provision to cross-feed fuel. Either tank could be independently selected to supply fuel to the engine via a manually-operated cockpit selector, with the selector isolating the fuel supply from one tank whilst connecting the other tank to the engine. The main fuel tank was equipped with a fuel gauge, which the pilot reported as reading near to empty when approximately three gallons of fuel remained. The auxiliary fuel tank was not equipped with a gauge.

Several weeks before the accident, the pilot had depleted the contents of the auxiliary fuel tank only by running the engine on the ground until it stopped. The

aircraft was then flown on several occasions using the main tank only and with no fuel being uploaded to the auxiliary tank.

The last flight prior to the accident had taken place one week earlier. During the pre-flight inspection, the pilot stated that he had visually checked the main fuel tank quantity. He did not check the auxiliary fuel tank as he assumed it to be empty. After landing, the fuel gauge was reading near to empty and, based on his previous check of the main tank and flight time, he estimated that the main tank contained approximately three gallons of fuel. He then parked the aircraft in a hangar.

On the morning of the accident, the pilot removed the aircraft from the hangar and carried out a pre-flight inspection. The pilot stated that when the weather was cold, as it was on the morning of the accident, the fuel tank filler caps were difficult to remove. Believing that the auxiliary fuel tank was empty, and having previously estimated that the main tank contained approximately three gallons of fuel, he decided not to visually check the fuel tanks. With the main tank selected, he started the engine. After allowing the engine to warm, he then taxied to the runway where he completed the pre-flight checks. During the takeoff run full power was obtained

but shortly after getting airborne the engine lost power. Realising that he may not be able to clear the terrain ahead, he closed the throttle and made a right turn to land on a down-sloping area of uneven ground. The aircraft touched down gently at a groundspeed of about 40 kt. However, the left wingtip contacted the ground and shortly afterwards the left and nose landing gear collapsed. The aircraft tipped forward onto its nose and right landing gear before coming to a stop. The left and nose landing gear, both wing leading edges, wing tips and propeller were damaged. The pilot was wearing a full harness and was uninjured. Unaided, he vacated the aircraft through the canopy.

The aircraft was recovered to the hangar, where it was found that the main fuel tank was empty, but the auxiliary fuel tank contained two gallons of fuel. Fuel was drained from the gascolator and carburettor, tested and found to be uncontaminated. The pilot stated that during the previous week, the aircraft had been parked slightly right wing down and he considered that fuel had transferred from the main tank to the auxiliary tank through a defect in the fuel tank selector. He also stated that he should have visually checked the contents of both fuel tanks prior to flight.